09/812,269

```
=> e 5-hydroxyindole/cn
E1
                   5-HYDROXYINDOL-3-YLACETIC ACID/CN
             1
                   5-HYDROXYINDOL-3-YLGLYOXYLIC ACID AMIDE/CN
E2
             1
             1 --> 5-HYDROXYINDOLE/CN
E3
                   5-HYDROXYINDOLE COMPOUND WITH 2,4,7-TRINITRO-9-FLUORENONE/CN
E4
             1
                   5-HYDROXYINDOLE DIMER/CN
E5
             1
E6
             1
                   5-HYDROXYINDOLE RADICAL CATION/CN
                   5-HYDROXYINDOLE-1-CARBOXYLIC ACID/CN
E7
             1
                   5-HYDROXYINDOLE-1-CARBOXYLIC ACID TERT-BUTYL ESTER/CN
E8
             1
                   5-HYDROXYINDOLE-2-CARBOXYLIC ACID/CN
E9
             1
                   5-HYDROXYINDOLE-2-CARBOXYLIC ACID ETHYL ESTER/CN
E10
             1
E11
             1
                   5-HYDROXYINDOLE-3-ACETALDEHYDE/CN
E12
                   5-HYDROXYINDOLE-3-ACETAMIDE/CN
=> d e3
NO L# DEFINED
=> s e3
             1 5-HYDROXYINDOLE/CN
=> d 11
I_{1}1
     ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN
     1953-54-4 REGISTRY
                          (CA INDEX NAME)
     1H-Indol-5-ol (9CI)
OTHER CA INDEX NAMES:
     Indol-5-ol (6CI, 7CI, 8CI)
OTHER NAMES:
CN
     5-Hydroxy-1H-indole
CN
     5-Hydroxyindole
CN
     NSC 87503
FS
     3D CONCORD
MF
     C8 H7 N O
CI
     COM
                  AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
LC
     STN Files:
       BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, EMBASE, HODOC*, IFICDB, IFIPAT,
       IFIUDB, MEDLINE, NIOSHTIC, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER,
       USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources: EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)
      CAplus document type: Conference; Journal; Patent
DT.CA
       Roles from patents: ANST (Analytical study); BIOL (Biological study);
RL.P
       PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
       reagent); USES (Uses); NORL (No role in record)
       Roles for non-specific derivatives from patents: ANST (Analytical
RLD.P
       study); BIOL (Biological study); RACT (Reactant or reagent)
       Roles from non-patents: ANST (Analytical study); BIOL (Biological
RL.NP
       study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP
       (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or
       reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical
       study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP
       (Properties); RACT (Reactant or reagent)
```

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

618 REFERENCES IN FILE CA (1907 TO DATE)

44 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

620 REFERENCES IN FILE CAPLUS (1907 TO DATE)

26 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 6.62 6.83

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 11:16:02 ON 05 OCT 2004
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FILE COVERS 1907 - 5 Oct 2004 VOL 141 ISS 15 FILE LAST UPDATED: 4 Oct 2004 (20041004/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 11

L2 643 L1

=> s pharmaceutical composition

190415 PHARMACEUTICAL

84718 PHARMACEUTICALS

241534 PHARMACEUTICAL

(PHARMACEUTICAL OR PHARMACEUTICALS)

620896 COMPOSITION

277038 COMPOSITIONS

892672 COMPOSITION

(COMPOSITION OR COMPOSITIONS)

1298760 COMPN

521006 COMPNS

1590260 COMPN

(COMPN OR COMPNS)

2025580 COMPOSITION

(COMPOSITION OR COMPN)

21367 PHARMACEUTICAL COMPOSITION

(PHARMACEUTICAL (W) COMPOSITION)

=> s 12 and 13

L3

L4 11 L2 AND L3

=> d bib abs 1-11 14

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN

```
AN
     2004:515481
                 CAPLUS
DN
     141:71442
     Preparation of aryl, aryloxy, and alkyloxy substituted 1H-indol-3-yl
ΤI
     glyoxylic acid derivatives as inhibitors of plasminogen activator
     inhibitor-1 (PAI-1)
     Jennings, Lee Dalton; Elokdah, Hassan Mahmoud; McFarlane, Geraldine Ruth
IN
     Wyeth, John, and Brother Ltd., USA
PA
     PCT Int. Appl., 44 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                                             APPLICATION NO.
                                                                     DATE
     PATENT NO
                         KIND
                                 DATE
                                             ______
                          _ _ _ _
                                                                     _ _ _ _ _ _ _
                                             WO 2003-US38934
                                                                     20031209
PΙ
     WO 2004052854
                          Α2
                                 20040624
                                 20040805
     WO 2004052854
                          Α3
                    AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             AE, AG,
                     CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             CN, CO,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
                         PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             NZ, OM,
                     PG,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM,
             AZ, BY, KG, KZ
                             LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
         RW: BW, GH, GM, KE,
             BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
             MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
             GQ, GW, ML, MR, NE, SN, TD, TG
                                 20040715
                                             US 2003-731308
                                                                     20031209
     US 2004138283
                          Α1
PRAI US 2002-432329P
                                 20021210
                          P
     MARPAT 141:71442
OS
GI
                               R5-
             R^1
                     Ι
                                  - X
                   HO2C
                                       CN
                                           III
     The title compds. [I; R1 = II (wherein R4 = H, halo, alkyl, etc.; X = O,
AB
```

The title compds. [I; R1 = II (wherein R4 = H, halo, alkyl, etc.; X = O S, NH; R5 = alkyl, perfluoroalkyl, cycloalkyl, etc.), alkyl, benzo[1,3]dioxol-5-ylmethyl, cycloalkylalkyl, etc.; R2 = H, alkyl,

cycloalkyl, etc.; R3 = H, halo, alkyl, etc.], useful as inhibitors of plasminogen activator inhibitor (PAI-1) for treating conditions resulting from fibrinolytic disorders, such as deep vein thrombosis, coronary heart disease and pulmonary fibrosis, were prepared E.g., a 4-step synthesis of III, starting from indole and 4-iodoanisole, which showed 23% PAI-1 inhibition at 25 μ M, was given. The **pharmaceutical compn.** comprising the compound I is claimed.

Ъ4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN ΑN 2004:430796 CAPLUS DN 141:7139 TIPreparation of indolylquinoxalinones for treating hyperproliferative disorders and diseases associated with angiogenesis Ladouceur, Gaetan H.; Bear, Brian; Bi, Cheng; Brittelli, David R.; Burke, IN Michael J.; Chen, Gang; Cook, James; Dumas, Jacques; Sibley, Robert; Turner, Michael R. PΑ Bayer Pharmaceuticals Corporation, USA PCT Int. App \downarrow ., 217 pp. SO CODEN: PIXXD2 DT Patent LA English FAN.CNT 1 PATENT NO. KIND APPLICATION NO. DATE DATE PΙ WO 2004043950 WO 2003-US36003 20031110 20040527 Α1 AE, AG, AL, ÀM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, KD, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, RW: BW, GH, GM, KE, LS, MW, BG, CH, CY, CZ, DE, DK, ÈE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD TG PRAI US 2002-425490P ₽ 20021112 US 2003-460915P 20030407 US 2003-484202P 20030630 OS MARPAT 141:7139 GI R^4 R11

The invention relates to title compds. I [wherein Ar = 6-membered aromatic ring containing 0-2 N atoms; R1 and R2 = independently H, halo, CF3, acyl, piperidinyl, piperazinyl, morpholinyl, or (un) substituted alkyl, alkoxy, amino, pyrrolidinyl, Ph, etc.; R3 = H, alkyl, OH, NO2, NH2, alkylamino, alkoxyamino, or (un) substituted benzoylamino; R4 = H, OH, halo, CN, acyl, sulfamoyl, trialkylsiloxy, tetrazolyl, thienyl, pyrrolyl, pyrimidinyl, oxazolyl, furanyl, or (un) substituted alkyl, alkenyl, alkynyl, alkoxy,

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amino, oxadiazolyl, Ph, pyridyl(oxy), carbamoyl; R11 and R12 =
     independently 4, F, or Cl with the proviso that when one of R11 and R12 =
     F or Cl, the other must be H; and pharmaceutically acceptable salts and
     esters thereof] The invention also relates to the use of I and their pharmaceutical compns. for treating hyperproliferative
     disorders and diseases associated with angiogenesis (no data). Examples
     include representative syntheses for compds. of the invention,
     pharmaceutical comprising them, and tumor model
     assays (no specific data given). For instance, N-Boc-indole was coupled
     with di-Me oxalate using t-BuLi to give tert-Bu 2-[methoxy(oxo)acetyl]-1H-
     indole-1-carboxylate (72%). Cyclization of the dione with
     1,2-phenylenediamine in AcOH afforded the quinoxalinone II (77%).
RE.CNT 3
              THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 3 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
     2004:143118 / CAPLUS
     140:181462
     Preparation of (aryloxy) pyrimidine and (aryloxy) pyridazine as vanilloid
     receptor ligands
     Chkrabarti, Partha P.; Chen, Ning; Doherty, Elisabeth M.; Dominguez,
     Celia; Falsey, James Richard; Fotsh, Christopher H.; Hulme, Christopher;
     Katon, Jodie; Nixey, Thomas; Norman, Mark H.; Ognyanov, Vassil I.; Pettus,
     Liping H.; Rzasa, Robert Michael; Stec, Markian; Wang, Hui-ling; Zhu,
     Jiawang
     Amgen Inc., WSA
     PCT Int. Appl., 340 pp.
     CODEN: PIXXD2
     Patent
     English
FAN.CNT 2
     PATENT NO.
                          KIND
                                 DATE
                                             APPLICATION NO.
                                                                     DATE
     WO 2004014871
                          A1
                                 20040219
                                             WO 2003-US25191
                                                                     20030808
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU)
                         CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU,
                         ĻV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
         RW: GH, GM, KE, LS,
                              MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
                             SN, TD, TG
             GW, ML, MR, NE,
     US 2004082780
                                             US 2003-638009
                                 20040429
                          Α1
                                                                     20030808
PRAI US 2002-402422P
                                 200,20808
     MARPAT 140:181462
                   t-Bu
                                                   OMe
                  Ι
                                                         II
    Title compds. I [wherein J = O or S; X = N \setminus Or CR2; Y = N or CR3; wherein
     at least 1 of X and Y = N; R1 = (un) substituted Ph or heterocyclyl; R2 =
     independently R14, halo, OR4, NRaR4, or (un) substituted alkyl; R3 =
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independently H, halo, NH2, (di)alkylamino, or alkyl; wherein when X = CR2
     and Y = CR3, then at least 1 of R2 and R3 \neq H; R4 = independently
     (un) substituted optionally vicinally fused heterocyclyl; Ra =
independently H or (un) substituted Ph, PhCH2, or alkyl; Rd = independently
     H or Me; and pharmaceutically acceptable salts thereof] were prepared as
     vanilloid receptor ligands (no data). For example, coupling of
     4,6-dichloropyrimidine with 4-tert-butylphenylboronic acid in the presence
     of Pd(PPh3)4 in CH3CN gave 4-(4-tert-butylphenyl)-6-chloropyrimidine,
     which was etherified with 3-methoxyphenol using NaH to afford II. I and
     their pharmaceutical compns. are useful for the
     treatment of acute, inflammatory and neuropathic pain, dental pain,
     general headache, migraine, cluster headache, mixed-vascular and non-vascular syndromes, tension headache, general inflammation, arthritis,
     rheumatic diseases, osteoarthritis, inflammatory bowel disorders,
     inflammatory eye disorders, inflammatory or unstable bladder disorders,
     psoriasis, skin complaints with inflammatory components, chronic
     inflammatory conditions, inflammatory pain and associated hyperalgesia and
     allodynia, neuropathic pain and associated hyperalgesia and allodynia,
     diabetic neuropathy\pain, causalgia, sympathetically maintained pain,
     deafferentation syndromes, asthma, epithelial tissue damage or
     dysfunction, herpes simplex, disturbances of visceral motility at
     respiratory, genitour inary, gastrointestinal or vascular regions, wounds,
     burns, allergic skin reactions, pruritus, vitiligo, general
     gastrointestinal disorders, gastric ulceration, duodenal ulcers, diarrhea,
     gastric lesions induced by necrotizing agents, hair growth, vasomotor or
     allergic rhinitis, bronchial disorders or bladder disorders (no data).
              THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 6
              ALL CYTATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 4 OF 1/1 CAPLUS COPYRIGHT 2004 ACS on STN
     2003:950982
                  CAPLUS
     140:16736
     Preparation of diarylurea derivatives useful for the treatment of protein
     kinase dependent diseases
     Floersheimer, \Andreas; Furet, Pascal; Manley, Paul William; Bold, Guido;
     Boss, Eugen; Guagnano, Vito; Vaupel, Andrea
     Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.
     PCT Int. Appl., 170 pp.
     CODEN: PIXXD2
     Patent
     English
FAN.CNT 1
     PATENT NO.
                          KIND
                                 DATE
                                              APPLICATION NO.
                                                                      DATE
                          ----
     WO 2003099771
                           A2
                                 20031204
                                              WO 2003-EP5634
                                                                      20030528
     WO 2003099771
                           Α3
                                 20040401
         W: AE, AG, AL, AM, AT, AU, AZ, &A, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU,
             LV, MA, MD, MK, MN, MX, NI, NO\ NZ, OM, PH, PL, PT, RO, RU, SC,
             SE, SG, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ,
                                               \TM
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
PRAI GB 2002-12413
                           Α
                                 20020529
     GB 2003-5684
                           Α
                                 20030312
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GB 2003-9219

MARPAT 140:16736

$$(R^4)_{q} \xrightarrow{A} A^{1} (Y^{1})_{m} \xrightarrow{R^5} I$$

The invention relates to the use of diaryl urea derivs. [I; G is not AΒ present and Z = a radical of the formula Q; A = CH, N, N \rightarrow O; A1 = N, N \rightarrow O, with the proviso that not more than one of A and A1 can be $N \rightarrow 0$; n = 1, 2; m = 0-2; p = 0, 2, 3; q = 0-5; X = (un) substituted NH if p = 0; or if p is 2 or 3, X = nitrogen which together with (CH2)pand the bonds \represented in dotted (interrupted) lines (including the atoms to which they are bound) forms a ring, or X = CHK (wherein K = H or lower alkyl) and p = 0, with the proviso that the bonds represented in dotted lines, if p = 0, are absent; Y1 = 0, S, CH2; Y2 = 0, S, NH; with the proviso that (Y1)n-(Y2)m does not include O-O, S-S, NH-O, NH-S or S-O groups; R1, R2, k3, R5 = independently H or an inorg. or organic moiety or any two of them together form a lower alkylenedioxy bridge bound via the oxygen atoms, and the remaining one of these moieties is hydrogen or an inorg. or organic moiety; R4 (if present, i.e., if q is not zero) is an inorg. or organic molety] or tautomers thereof or pharmaceutically acceptable salts thereof in the\treatment of protein kinase dependent diseases or for the manufacture of pharmaceutical compns. for use in the treatment of said disease, especially a proliferative disease depending on any one or more of the following (tyrosine) protein kinases such as ras, Abl, VEGF-receptor tyrosine kinase, Flt3, and/or Bcr-Abl activity. Also disclosed are the use of the compds. I for the manufacture of pharmaceutical compns. for use in the treatment of said diseases, methods of use of the compds. I in the treatment of said diseases, pharmaceutical prekns. comprising the compds. I for the treatment of said diseases, processes for the manufacture of the compds. I, the use or methods of use of the compds. I as mentioned above, and/or the compds. I for use in the treatment of the animal or human body. For example, N-(4-(pyridin-4-yloxy)phenyl)-N'-(4-2,2,2-trifluoroethoxy-3trifluoromethylphenyl)urea and N-(4-[6-(4-hydroxyphenylamino)pyrimidin-4yl]phenyl]-N'-(4-2,2,2-trifluoroethoxy-3-trifluoromethylphenyl)urea at 10 μM inhibited gene c-Abl protein kinase by 98%, Kdr receptor tyrosine kinase by 100 and 96%, resp., and FNt3 receptor tyrosine kinase by 100%.

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ANSWER 5 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
L4
    2003:737721 CAPLUS
AN
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DN139:276815

Preparation of $3-(indo\grave{1}-3-y1)$ 4-heteroaryl substituted pyrrole-2,5-diones ΤI as GSK-3β inhibitors

Albaugh, Pamela Ann; Ammenn, Jochen; Burkholder, Timothy Paul; Clayton, INJoshua Ryan; Conner, Scott Eugene; Cunningham, Brian Eugene; Engler, Thomas Albert; Furness, Kelly Wayne; Henry, James Robert; Li, Yihong; Malhotra, Sushant; Tebbe, Mark Joseph; Zhu, Guoxin

Eli Lilly and Company, USA; et al. PΑ

PCT Int. Appl., 88 pp. SO

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE				
DT	WO 2003076398	Δ2	20030918	WO 2003-US5052	20030305				
PI	WO 2003076398	AZ A3	20030318	WO 2003 053032	20030303				
	W. AF AG AT.	TA MA	וז ביד ביד בי	AZ. BA. BB. BG. BR. BY.	BZ. CA. CH				

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CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
              CN, CO,
              FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
              KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
              MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK,
                       TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
              SL, TJ,
              ZW, AM,
                       AZ, BY
          RW: GH, GM,
                       KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
                       CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
              CH, CY,
                       RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
              NL, PT,
              GW, ML, MR, NE, SN, TD, TG
PRAI US 2002-363375P
                             Р
                                    20020308
                             Р
                                    20020402
     US 2002-369433P
     MARPAT 139:276815
OS
GΙ
     R^{1}
                    Ar
           Ŕ2
                          Ι
AB
     The title compds. [I; Ar = (un) substituted benzofuryl, indolyl, quinolinyl, etc.; R1 = H, alkoxy, halo, etc.; R2 = H, alkyl,
      (un) substituted piperidin-4(or 3)-yl, etc.; R3 = H, halo, alkyl,
     cyclopropyl; or R2 and R3 taken together = CH2CH2CH(CH2OH)CH2; R4, R5 = H,
     halo], useful for treating G_{SK-3\beta} mediated diseases such as diabetes
     and Alzheimer's disease, were prepared Thus, reacting 2-[1-(3-
     hydroxypropyl)-1H-indol-3-yl] acetamide with Me (1-methyl-1H-indol-4-
     yl) oxoacetate in the presence of tert-BuOK in DMF afforded 54% I [Ar =
     1-methyl-1H-indol-4-yl; R1, R3-R5 = H; R2 = 3-hydroxypropyl] which showed
     IC50 of 0.1757 \muM against GSK-3\beta
                                              Pharmaceutical
     compn. comprising the compound I was claimed.
     ANSWER 6 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
L4
AN
     2002:122993 CAPLUS
DN
     136:167381
     Preparation of cinnoline compounds having antiangiogenic and/or vascular
TI
     permeability reducing effect
IN
     Hennequin, Laurent Francois Andre
     Astrazeneca AB, Swed.; Astrazeneca UK Limited
PA
     PCT Int. Appl., 123 ppl
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                            KIND
                                                 APPLICATION NO.
                                                                           DATE
                                    DATE
      _____
                            ----
     WO 2002012228
ΡI
                             Α1
                                    20020214
                                                 WO 2001-GB3533
                                                                           20010807
             AE, AG, AL, AM, AT, AU, AZ, BA\lambda BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
              GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
                                                  TJ, TM, TR, TT, TZ, UA, UG, US,
              RO, RU, SD, SE, SG, SI, SK, SL,
              \mathtt{UZ}, \mathtt{VN}, \mathtt{YU}, \mathtt{ZA}, \mathtt{ZW}, \mathtt{AM}, \mathtt{AZ}, \mathtt{BY}, \mathtt{R}^{\mathsf{L}}_{\mathsf{G}}, \mathtt{KZ}, \mathtt{MD}, \mathtt{RU}, \mathtt{TJ}, \mathtt{TM}
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
              DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
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CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2001076521
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     BR 200101305/7
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                           A1
                                              US 2003-333592
                                 20031113
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     NO 20030006/24
                           Α
                                 20030407
                                              NO 2003-624
                                                                      20030207
PRAI EP 2000-402255
                           Α
                                 20000809
     WO 2001-GBB533
                           W
                                 20010807
     MARPAT 136:167381
os
GΙ
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$$(R^2)_{\mathfrak{m}}$$

$$(R^2)_{\mathfrak{m}}$$

$$R^{\mathfrak{S}}$$

$$G^{\mathfrak{G}^{1}}$$

$$R^{\mathfrak{G}^{5}}$$

$$R^{\mathfrak{G}^{5}}$$

$$R^{\mathfrak{G}^{5}}$$

The invention relate's to compds. of the formula [I; either any one of G1, AB G2, G3, G4 and G5 is hitrogen and the other four are CH, or G1, G2, G3, G4 and G5 are all CH; Z is O, NH, S, CH2 or a direct bond; Z is linked to any one of G1, G2, G3 and G4 which is a free carbon atom; n is an integer from 0 to 5; any of the substituents R1 may be attached at any free carbon atom of the indole, azaindole or indazole group, such free carbon atoms may be G1, G2, G3, G4 or G5 or may be at the 3-position of the indole, azaindole or indazole group; m = an integer of 0 to 3; Ra = H; Rb = H, C1-4 alkyl, C1-4 alkoxy-C1-4 alkyl, amino-C1-4 alkyl, C1-3 alkylamino-C1-4 alkyl, di(C1-3 alkyl)amino-C1-4 alkyl, C2-5 alkenylamino-C1-4 alkyl, C2-5 alkynylamino-C1-4 alkyl, or $\C1-5$ alkyl(ring A) (wherein ring A = optionally substituted azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, morpholino, or thiomorpholino); R1 = H, oxo, hydroxy, halogeno, C1-4 alkyl, C1-4 alkoxy, C1-4 alkoxy-C1-4 alkyl, amino-C1-4 alkyl, C1-3 alkylamino-C1-4 alkyl, di(C1-3 \alkyl)amino-C1-4 alkyl, -C1-5alkyl-(ring B) (wherein ring B = azetidinyl, pyrolidinyl, piperidinyl, piperazinyl, N-methylpiperazinyl, N-ethylpiperazinyl, morpholino, or thiomorpholino); R2 = H, OH, halogeno, cyano, NO2 λ CF3, C1-3 alkyl, C1-3 alkoxy, C1-3 alkylsulfanyl, NR3R4 (wherein R3, $\R4$ = H or C1-3alkyl), etc.] and salts thereof, processes for the preparation of such compds. Also disclosed are pharmaceutical compns. containing a compound of formula I or a pharmaceutically acceptable salt thereof as active ingredient and the use of a compound of formula I in the manufacture of medicament for the production

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antiangiogenic and/or vascular permeability reducing effect in warm-blooded animals. The compds. of formula I and the pharmaceutically acceptable salts thereof inhibit the effects of vascular endothelial growth factor (VEGF), a property of value in the treatment of a number of disease states including cancer and rheumatoid arthritis (no data). Thus, a suspension of 4-chloro-6-methoxy-7-[3-(pyrrolidin-1-yl)propoxy]cinnoline 60, 4-fluoro-5-hydroxy-2-methylindole 46, and cesium carbonate 121 mg in DMA (2 mL) was heated at 100° for 2 h to give 4-(4-fluoro-2-methylindol-5-yloxy)-6-methoxy-7-[3-(pyrrolidin-1-yl)propoxy]cinnoline (32 mg, 38%).

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 7 OF 11 CARLU$
L4
                             COPYRIGHT 2004 ACS on STN
AN
     2002:122991 CAPLUS
     136:183717
DN
     Preparation of quinoline derivatives having VEGF inhibiting activity
TI
     Hennequin, Laurent Francois Andre
IN
     Astrazeneca AB, Swed. Astrazeneca UK Limited
PA
SO
     PCT Int. Appl., 129 pp.
     CODEN: PIXXD2
     Patent
DT
LA
     English
FAN.CNT 1
                                            APPLICATION NO.
     PATENT NO.
                         KIND
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                                                                    DATE
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             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
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                                            US 2003-332274
                                                                    20030107
    NO 2003000625
                          Α
                                20030207
                                            NO 2003-625
                                                                    20030207
PRAI EP 2000-402254
                          Α
                                20000809
     WO 2001-GB3553
                          W
                                2d010808
OS
     MARPAT 136:183717
GΙ
                          R?
                                      Ι
   The invention relates to I (e.g. 6-cyano-\chi-[3-(1,1-
     dioxothiomorpholino)propoxy]-4-(indol-5-ylamino)quinoline hydrochloride
     (1)) wherein: either any one of G1, G2, G3, G4 and G5 is N and the other
     four are -CH-, or G1, G2, G3, G4 and G5 are all -CH-; Z is -O-, -NH-, -S-,
     -CH2- or a direct bond; Z is linked to any one of G1, G2, G3 and G4; n is
    an integer from 0 to 5; m is an integer from 0 to 3; Ra represents H or
    fluoro; Rb, R1 and R2 are defined herein and salk thereof, process for the
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antiangiogenic and/or vascular permeability reducing effect in warm-blooded animals. I and the pharmaceutically acceptable salts thereof

I or a pharmaceutically acceptable salt thereof $a\hat{s}_{i}$ active ingredient and the use of I in the manufacture of a medicament for the production of an

preparation of such compds., pharmaceutical compns. containing

inhibit the effects of VEGF, a property of value in the treatment of a number of diseases states including cancer and rheumatoid arthritis. Thirty-five example prepns. are included. For example, a solution of 4-chloro-6-cyano-7-[3-(1,1-dioxothiomorpholino)propoxy]quinoline (0.21 mmol) and 5-aminoindole (0.25 mmol) in 2-pentanol (2.5 mL) containing 6.2 N HCl in isopropanol (40 μ l) was heated at 120 °C for 3 h; after cooling, the solid was collected by filtration, washed with isopropanol followed by ether and dried under vacuum to give 1 (90 %). Pharmacol. test procedures are described but test results for the claimed compds. are not given. RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 8 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN 2001:300706 CAPLUS 134:326411 Preparation of 3-(2-indolyl)quinoline-2-one derivatives as tyrosine kinase Arrington, Kenneth L.; Bilodeau, Mark T.; Fraley, Mark E.; Hartman, George D.; Hoffman, William F; Hungate, Randall W.; Kim, Yuntae Merck & Co., Inc., USA PCT Int. Appl., 130 pp. CODEN: PIXXD2 Patent English FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------------_____ 20010426 WO 2001029025 A2 WO 2000-US28625 20001016 20011101 WO 2001029025 A3 BR 2000-14843 20020611 20001016 BR 2000014843 Α EP 2000-978230 20020731 20001016 EP 1226136 Α2 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL TR 200201051 T2 20020923 TR 2002-200201051 20001016 JP 2003512369 T2 ŲP 2001-531825 20001016 20030402 EE 200200201 ÈĘ 2002-201 20001016 Α 20030616 NZ\ 2000-518001 NZ 518001 Α 20040528 20001016 US 6306874 US 2000-690598 В1 20011023 20001017 ZA 2002-2985 ZA 2002002985 20030416 20020416 Α NO 2002001820 NO 2002-1820 Α 20020523 20020418 US 6794393 US 2002-110872 20020418 20040921 В1 BG. 2002 106710 BG 106710 20020516 20030331 Α PRAI US 1999-160356P Ρ 19991019 WO 2000-US28625

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L4

AN

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TI

IN

PΑ

SO

DT

LA

PΙ

OS

GI

MARPAT 134:326411

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Т
                           O CH2CH2 N
                                            II
     Title compds. [I; R = (CH3)2NCH2CH(CH3)CH2O, (CH3OCH2CH2)(C6H5CH2)NCH2CH2O
ΑB
       (CH3CH2) 2µCH2CH2O, (CH3) (C6H5CH2) NCH2CH2CH2O,
     (CH3OCH2CH2) (HOOCCH2CH2) NCH2CH2O, (CH3OCH2CH2) (CH3SO2) NCH2,
     cycloalkylaminoalkyl, heterocyclylalkyl, etc.], stereoisomer, and
     pharmaceut/ically acceptable salts are prepared and inhibit, regulate and/or
     modulate tyrosine kinase signal transduction. Title compds. are tested on
     VEGF-stimulated mitogenesis of human vascular endothelial cells in culture
     with IC50 values between 0.001-5.0 μM. \ Pharmaceutical
     compns. and methods of using them to treat tyrosine
     kinase-dependent diseases and conditions, such as angiogenesis, cancer,
     tumor growth, atherosclerosis, age related macular degeneration, diabetic
     retinopathy, inflammatory diseases, etc. are discussed. Thus, the title
     compound II was prepared
     ANSWER 9 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
L4
AN
     1999:722896 CAPLUS
     131:317802
DN
     Pharmaceutical compositions comprising a positive
ΤI
     modulator of a nicotinic receptor agonist
     Gurley, David; Lanthorn, Thomas
IN
PΑ
     Astra Aktiebolag, Swed.
     PCT Int. Appl., 28 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                          KŀND
                                 DATE
                                             APPLICATION NO.
                                                                    DATE
ΡI
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                                             WO 1999-SE700
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     WO 9956745
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             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
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                                          $Z, UG, ZW, AT, BE, CH, CY, DE, DK,
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             ES, FI,
                     FR,
                         GB, GR, IE, IT, LN, MC, NL, PT, SE, BF, BJ, CF, CG,
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                                 20010821
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                                                                     19980504
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     CA 2331070
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                                             CA\ 1999-2331070
                                                                     19990428
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AU 9943023

AU 770849

A1

B2

19991123

20040304

AU \1999-43023

19990428

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19990428
                                             BR 1999-10180
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                          Α
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                                             NO 2000-5503
                                                                     20001101
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                          Ą
                                             US 2001-812269
                                                                     20010320
     US 2001041732
                          ľΆ
                                 20011115
     HK 1034205
                                 20040121
                                             HK 2001-105008
                                                                     20010717
                          A1
                                 19980504
PRAI US 1998-71826
                          Α
                                 1,9990428
     WO 1999-SE700
                          W
     The present invention relates to pharmaceutical compns
AΒ
     . comprising a pos. modulator\of a nicotinic receptor agonist, said pos.
     modulator having the capacity to increase the efficacy of the said
     nicotinic receptor agonist. As\an example, effect of nAChRa7
     modulator on agonist activity was measured by Ca2+ flux through
     nAChRα7 expressed in HEK-293 cells. The nicotinic agonist
     [-]spiro[1-azabicyclo[2,2,2]octane-3,5-oxazolidine]-2-one was used.
              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 1
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 10 OF 11/ CAPLUS COPYRIGHT 2004 ACS on STN
L4
     1995:1006753 CAPLUS
AN
     124:175829
DN
     Substituted naphthalene and indole compounds exhibiting selective
TI
     leukotriene B4 antagonist activity
     Huang, Fu Chih; Chan, Wan K.; Sutherland, Charles A.; Galemmo, Jr Robert
IN
     Rhone-Poulenc Rorer Pharmaceuticals Inc., USA
PA
     U.S., 26 pp. Cont.-in-part of U.S. Ser. No. 580,243, abandoned.
SO
     CODEN: USXXAM
DT
     Patent
     English
LΑ
FAN.CNT 2
     PATENT NO
                          KIND
                                 DATE
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                                             ______
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                                             US 1993-777246
                                                                     19930423
PI
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     WO 9204321
                          Α1
                                 19920319
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                                                                     19910906
         W: AU, CA, JP,
                          ับร
                         DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
         RW: AT, BE, CH,
PRAI US 1990-580243
                           B2
                                 19900910
                                 19910906
     WO 1991-US6447
os
     MARPAT 124:175829
GI
                                    R^7
       <sub>R</sub>15
            R14
                                              Rб
                 R13
                             R8
R16
                             R9
R17
                  R^{12}
       R18
                                    R10
            R11
                                         R^4
                                                   II
                        Ι
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This invention relates to naphthalene and indole derivs. I and II, resp.,

AB

containing an amido substituent, a substituent group having a terminal carboxylic acid or derivative thereof and a lipophilic substituent [i.e., at least one of R4, R5, R6, R7, R8, R9 and R10 and R11, R12, R13, R14, R15, R16, R17, R18/are A(CR2)aCONR'(CR2)bB; at least one of R4, R5, R6, R7, R8, R9 and R10 and R11, R12, R13, R14, R15, R16, R17, R18 are (CR2)dD(CR2)eE; and at least one of R4, R5, R6, R7, R8, R9 and R10 and R11, R12, R13, R14, R15, R16, R1 † 7, R18 are (CR2)ff(CR2)gG and the remaining R4, R5, R6, R7, R8, R9 and R10 and R11, R12, R13, R14, R15, R16, R17, R18 are H; where A is CRR or O; B and G are (un) substituted Ph; D = e.g., bond, O, CRR; E = e.g., CO2R', CONR'R'; F = e.g., bond, O, CRR; R = e.g., H; R' = e.g., H, alkyl; a, b, d, e, f, and g are independently 0-4] having selective LTB4 antagonist properties (no data) and to methods for the treatment of disorders which result from LTB4 activity and pharmaceutical compns. including such compds. Thus, e.g., amidation of bromoacetyl chloride with N-methyl-N-phenethylamine afforded N-methyl-N-phenethyl-2-bromoacetamide which was used to alkylate 5-hydroxyindole, thus affording 5-[2-(N-methyl-N-phenethyl)amino-2oxoethoxy]indole; formylation of the latter afforded 5-[2-(N-methyl-Nphenethyl)amino-2-oxoethoxy]indole-3-carboxaldehyde; N-alkylation of the latter with N-methyl-N-phenethyl-2-bromoacetamide afforded N-methyl-N-phenethyl-2-[(5-(2-methylphenethylamino-2-oxoethoxy)-3formyl)indol-1-yl]acetamide; condènsation of the latter with tri-Et phosphonoacetate afforded N-methyl-N-phenethyl-2-[3-(2-carbethoxyvinyl)-5-(2-(N-methyl-N-phenethyl)amino-2-oxoethoxy)indol-1-yl]acetamide.

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ANSWER 11 OF 1/1 CAPLUS COPYRIGHT 2004 ACS on STN
L4
     1980:94237 ÇAPLUS
AN
DN
     92:94237
ΤI
     Indole derivatives and their use in pharmaceutical
     compositions
IN
     Archibald, John Leheup; Ward, Terence James
     John Wyeth and Brother Ltd., UK
PΆ
     Eur. Pat. Appl., 24 pp.
SO
     CODEN: EPXXDW
DT
     Patent
LA
     English
FAN.CNT 1
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                                             APPLICATION NO.
                                                                     DATE
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     EP 2886
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     SU 1087073
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                                                                     19791218
                                             SU 1980-2862505
     SU 1110380
                          Α3
                                 19840823
                                                                     19800104
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SU 1083910 A3 19840330 SU 1980-2864113 19800107 AT 8004726 AT 1980-4726 Α 19831215 19800922 AT 375364 В 19840725 PRAI GB 1977-50053 19771201 AT 1978-8535 19781129 GΙ NHC (Z) NHCOR2 CH₂N Ι (Piperidinomethyl)indoles I (R = \H, HO, alkyl, alkoxy; R1 = H, alkyl; R2 = AB Ph, alkoxyphenyl, halophenyl, thienyl; Z = O, S), which inhibit neuronal uptake of 5-hydroxytryptamine by hat brain but do not inhibit uptake of noradrenaline and do not induce central nervous system depression or hypotension, were prepared Thus, Mannich reaction of indole with 4-(benzoylureido) piperidine gave 81% I.HCl (R = R1 = H; R2 = Ph; Z = O). => d his (FILE 'HOME' ENTERED AT 11:14:45 ON 05 OCT 2004) FILE 'REGISTRY' ENTERED AT 11:15:14 ON 05 OCT 2004 E 5-HYDROXYINDOLE/CN L1 1 S E3 FILE 'CAPLUS' ENTERED AT 11:16:02 ON 05 OCT 2004

L2643 S L1

L3 21367 S PHARMACEUTICAL COMPOSITION

L411 S L2 AND L3

=> s nicotinic

33639 NICOTINIC

1 NICOTINICS

L5 33640 NICOTINIC

(NICOTINIC OR NICOTINICS)

=> s l1 and l5

643 L1

Lб 16 L1 AND L5

=> s 14 and 16

1 L4 AND L6

=> d bib 17

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:722896 CAPLUS

DN 131:317802

TIPharmaceutical compositions comprising a positive modulator of a **nicotinic** receptor agonist

IN Gurley, David; Lanthorn, Thomas

PΑ Astra Aktiebolag, Swed.

SO PCT Int. Appl., 28 pp. CODEN: PIXXD2

DТ Patent

English LA

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PATENT NO.
                                            APPLICATION NO.
                         KIND
                                DATE
                                                                    DATE
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                                ----
                                             ----
                                            WO 1999-SE700
     WO/9956745
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         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
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             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
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PRAI US 1998-71826
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              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
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L1
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L2
            643 S L1
          21367 S PHARMACEUTICAL COMPOSITION
L3
             11 S L2 AND L3
L4
          33640 S NICOTINIC
L_5
L6
             16 S L1 AND L5
              1 S L4 AND L6
=> d 16 bib abs 1-16
L6
     ANSWER 1 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
AN
     2004:565052 CAPLUS
DN
     141:123483
     Preparation of indaneacetic acid derivatives and their use as
TI
    pharmaceutical agents
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Cantin, Louis-David; Choi, Soongyu; Clark, Roger B.; Hentemann, Martin F.; Ma, Xin; Rudolph, Joachim; Liang, Sidney X.; Akuche, Christiana; Lavoie,

FAN.CNT 1

IN

Rico C.; Chen, Libing; Majumdar, Dyuti; Wickens, Philip L.

PA Bayer Pharmaceuticals Corporation, USA

SO PCT Int. Appl., 230 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PAN.	~14 T	1																	
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TAGG	HS	2002	-435	310P		р		2002	1220										

PRAI US 2002-435310P P

OS MARPAT 141:123483

GΙ

$$R^2$$
 CO_2R^1 $Ar-L$ I

AB The title compds. [I; R1, R2 = H, alkyl, cycloalkyl; L = (CH2)mX, Y(CH2)nX, etc.; X = 0, S, S0, S02, Y = 0, S, S0, S02, (un)substituted NH; m = 1-3; n = 2-4; Ar = (un)substituted Ph, 5-6 membered heteroaryl containing up to there N atoms] which are useful in the treatment of diseases such as diabetes, obesity, hyperlipidemia, and atherosclerotic diseases, were prepared and formulated. Thus, coupling Et {(1S)-5-[3-(4-bromo-2-methoxyphenoxy)propoxy]-2,3-dihydro-1H-inden-1-yl}acetate (preparation given) with 3-thiopheneboronic acid in the presence of PdCl2(dppf).CH2Cl2, NaHCO3 in DME/H2O followed by treatment of the resulting ester with LiOH afforded (1S)-II.

II

L6 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN AN 2004:547098 CAPLUS

- DN 141:117382
- TI A single point mutation confers properties of the muscle-type nicotinic acetylcholine receptor to homomeric α 7 receptors
- AU Placzek, Andon N.; Grassi, Francesca; Papke, Thaddeus; Meyer, Edwin M.; Papke, Roger L.
- CS Department of Pharmacology and Therapeutics, J. Hillis Miller Health Science Center, University of Florida, Gainesville, FL, USA
- SO Molecular Pharmacology (2004), 66(1), 169-177 CODEN: MOPMA3; ISSN: 0026-895X
- PB American Society for Pharmacology and Experimental Therapeutics
- DT Journal
- LA English
- Although the muscle-type and homomeric α 7-type nicotinic AB acetylcholine receptors (nAChRs) share many structural features and bind $\alpha\text{-bungarotoxin}$ with high affinity, several important functional and pharmacol. properties distinguish these two major nAChR subtypes. We have shown previously that amino acid sequence in the second transmembrane (TM) domain of the $\boldsymbol{\beta}$ subunit is critical for pharmacol. distinction between muscle type and heteromeric neuronal (e.g., ganglionic) nAChRs. We tested the hypothesis that homologous substitution of amino acid sequence from the muscle $\beta 1$ subunit into the $\alpha 7$ subunit would confer specific properties of muscle-type receptors to mutant lpha7 nAChRs. In this study, we show that a single amino acid substitution at the $\alpha 7\ \text{TM2}$ 6' position makes both biophys. and pharmacol. properties of the mutant receptors resemble those of wild-type muscle nAChR. This mutation produces significant changes in acetylcholine potency and response kinetics, eliminating the characteristic fast desensitization of $\alpha 7\,$ and dramatically reducing divalent ion permeability relative to wild-type α 7. The TM2 T6'F mutation also produces a profound increase in activation by succinylcholine compared with either wild-type $\alpha 7\ \text{or}$ neuronal β -subunit-containing receptors and the loss of potentiation by 5-hydroxyindole. Thus, the $\alpha 7$ TM2 T6'F mutant displays several features that are similar to the muscle nAChR, some of which are not typically thought to be regulated by the pore-lining domain of the receptor.
- RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L6 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:522309 CAPLUS
- DN 141:100299
- TI Nicotinic cholinergic stimulation promotes survival and reduces motility of cultured rat cerebellar granule cells
- AU Fucile, S.; Renzi, M.; Lauro, C.; Limatola, C.; Ciotti, T.; Eusebi, F.
- CS Istituto Pasteur Fondazione Cenci-Bolognetti and Dipartimento di Fisiologia Umana e Farmacologia, Centro di Eccellenza Biologia e Medicina Molecolare, Universita di Roma "La Sapienza", Rome, I-00185, Italy
- SO Neuroscience (Oxford, United Kingdom) (2004), 127(1), 53-61 CODEN: NRSCDN; ISSN: 0306-4522
- PB Elsevier Science Ltd.
- DT Journal
- LA English
- Despite many studies on the functional expression of neuronal nicotinic acetylcholine receptors (nAChRs), an exhaustive description of the long-term effects of nicotine (Nic) stimulation in cerebellar granules is still far to be completed. For this reason, we addressed the expts. stimulating cultured cerebellar granule neurons (CGN) with Nic, focusing on the effects on cell motility and survival. Using electrophysiol. and Ca2+-fluorescence techniques, we found a subset of rat CGN that responded to Nic by inward whole cell currents and by short-delay Ca2+ transients. These responses were mediated through both homomeric and heteromeric nAChRs, as assessed by their sensitivity to α -bungarotoxin $(\alpha$ -BTX), dihydro- β -erythroidine (DH β E), methyllycaconitine (MLA) and 5-hydroxyindole (50H-indole).

Once established the expression of $\alpha\textsc{-BTX}$ -sensitive and insensitive nAChRs and their ability to trigger Ca2+ responses in CGN, we aimed at investigating their possible role on cell survival and motility. We demonstrate that Nic stimulation significantly increases the survival of CGN exposed to the apoptosis-promoting low K+ medium. This anti-apoptotic effect is likely mediated through $\alpha 7$ nAChRs since we found that it was mimicked by choline, was insensitive to DHßE and was fully inhibited by $\alpha\textsc{-BTX}$. Furthermore, we report that Nic neg. modulates CGN motility, reducing the basal cell movement through a pored membrane by the activation of $\alpha\textsc{-BTX}$ -insensitive nAChRs. We conclude that CGN express various types of nAChRs, which are differently involved in regulating Nic-mediated modulation of cell survival and migration, and we suggest potential regulatory roles for cholinergic receptors during cerebellar development.

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

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2002:831752 CAPLUS
AN
     137:337875
DN
     Preparation of 6H-oxazolo[4,5-e]indoles as nicotinic
TТ
     acetylcholine receptor ligands and/or serotonergic ligands
     Boettcher, Henning; Schiemann, Kai; Leibrock, Joachim
IN
     Merck Patent G.m.b.H., Germany
PA
     Ger. Offen., 12 pp.
SO
     CODEN: GWXXBX
DT
     Patent
     German
LA
FAN.CNT 1
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                                            APPLICATION NO.
                                                                    DATE
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PI
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                                                                    20020405
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PRAI DE 2001-10121217
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     WO 2002-EP3784
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                                20020405
     CASREACT 137:337875; MARPAT 137:337875
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GΙ
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L6

AB Title compds. [I; R1 = H, Het1; R2 = H, A, cycloalkyl, (CH2)pN(R5)2,

(CH2)pOR5, (CH2)nAr, (CH2)nHet; R3 = H, halo, OH, OA, O(CH2)nAr; R4 = H, A, (CH2)nAr; R5 = H, A; A = (branched) C1-10 alkyl; Ar = (substituted) Ph, naphthyl, biphenyl; Het = 5-10 membered (un)saturated aromatic (substituted) mono- or bicyclic heterocyclyl; Het1 = 5-10 membered (un)saturated aromatic (substituted) mono-, bi-, tricyclic heterocyclyl; n = 0-8; p = 1-8], were prepared as nicotinic acetylcholine receptor ligands and/or serotonergic ligands (no data). Thus, MeNH2 and MnO2 were added to 5-hydroxy-1H-indole in DMF followed by stirring for 18 h at room temperature to give 6H-oxazolo[4,5-e]indole.

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137:337918
DN
     Preparation of dihydroimidazo[4,5-e]indoles and 7H-pyrrolo[3,2-
TI
     f]quinoxalines as nicotinic acetylcholine receptor ligands
     and/or serotonergic ligands
     Schiemann, Kai; Boettcher, Henning; Leibrock, Joachim
IN
     Merck Patent G.m.b.H., Germany
PA
     Ger. Offen., 10 pp.
SO
     CODEN: GWXXBX
DT
     Patent
     German
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FAN.CNT 1
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                         KIND
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                          A2
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             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
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PRAI DE 2001-10121215
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     WO 2002-EP3582
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                                20020330
     MARPAT 137:337918
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ANSWER 5 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

L6

AN

2002:831751 CAPLUS

Title compds. [I; ABD = NR6CR2:N, N:CR2NR6, N:CR7CR8:N; R1 = H, Hetl; R2 = H, (branched) alkyl, cycloalkyl, (CH2)nN(R5)2, (CH2)nOR5, (CH2)nAr, (CH2)nHet; R3 = H, halo, OH, alkoxy, O(CH2)nAr; R4 = H, (branched) alkyl, (CH2)nAr; R5 = H, (branched) alkyl; R6-R8 = H, (branched) alkyl, (CH2)nAr; or R7R8 = C3-6 alkylene, Ar = (substituted) Ph, naphthyl, biphenyl; Het = 5-10 membered (un)saturated aromatic (substituted) mono- or bicyclic

heterocyclyl; Het1 = 5-10 membered (un)saturated aromatic (substituted) mono-, bi-, tricyclic heterocyclyl; n = 0-8], were prepared as **nicotinic** acetylcholine receptor ligands and/or serotonergic ligands (no data). Thus, 3-quinuclidinone hydrochloride and KOH were added to 5-nitro-1H-indole in H2O/MeOH followed by stirring for 48 h at boiling temperature to give 3-(5-nitro-1H-indol-3-yl)-1-azabicyclo[2,2,2]oct-2-ene which

was treated with H2 and Pd/C in MeOH. The resulting 3-(1-azabicyclo[2,2,2]oct-3-yl)-1H-indol-5-ylamine was stirred with EtNH2 and MnO2 in DMF for 12 h at room temperature to give 8-(1-aza-bicyclo[2,2,2]oct-3-yl)-2-methyl-3,6-dihydroimidazo[4,5-e]indole.

- L6 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:701425 CAPLUS
- DN 138:568
- TI 5-Hydroxyindole potentiates human $\alpha 7$ nicotinic receptor-mediated responses and enhances acetylcholine-induced glutamate release in cerebellar slices
- AU Zwart, R.; De Filippi, G.; Broad, L. M.; McPhie, G. I.; Pearson, K. H.; Baldwinson, T.; Sher, E.
- CS Lilly Research Centre, Eli Lilly and Company Limited, Windlesham, Surrey, GU20 6PH, UK
- SO Neuropharmacology (2002), 43(3), 374-384 CODEN: NEPHBW; ISSN: 0028-3908
- PB Elsevier Science Ltd.
- DT Journal
- LA English
- AB The effects of 5-hydroxyindole (5-HI) have been investigated on human $\alpha 7$ nicotinic acetylcholine receptors (nAChRs) expressed in Xenopus oocytes and GH4 cells, on native $\alpha 7$ nAChRs expressed by IMR-32 cells and on $\alpha 7$ nAChR-mediated events in mossy fiber-granule cell synapses in rat cerebellar slices. In oocytes expressing $\alpha 7$ nAChRs, 5-HI potentiated sub-maximal, 60 μM ACh-induced ion currents in a concentration-dependent manner, the threshold effective concentration being 30 μM .

5-HI itself did not act as an agonist on $\alpha7$ nAChRs. A maximum potentiation of 12 times the control was observed at 20 mM 5-HI. The effect of 1 mM 5-HI on the concentration-response curve for ACh revealed that 5-HI increased the potency as well as the efficacy of ACh on $\alpha7$ nAChRs. 5-HI also potentiated $\alpha7$ -mediated increases in intracellular free calcium levels in both mammalian cells heterologously expressing human $\alpha7$ nAChRs and in human IMR-32 neuroblastoma cells expressing native $\alpha7$ nAChRs. At mossy fiber-granule cell synapses, application of 1 mM ACh induced glutamate-evoked excitatory post-synaptic currents (EPSCs). Co-application of 1 mM 5-HI with 1 mM ACh further increased the frequency of the EPSCs. The ACh-induced release, as well as the 5-HI-induced enhancement of release, were blocked by 1-10 nM methyllycaconitine or 200 nM α -bungarotoxin, demonstrating that both effects were mediated by presynaptic $\alpha7$ nAChRs. The results demonstrate that responses mediated by $\alpha7$ nAChRs are strongly potentiated by 5-HI.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
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- AN 2001:672048 CAPLUS
- DN 135:246996
- TI Preparation of 2,5-Diamino-benzaldehyde-derivates and their usage in hair dyes
- PA Wella A.-G., Germany
- SO Ger. Gebrauchsmusterschrift, 38 pp. CODEN: GGXXFR
- DT Patent
- LA German
- FAN.CNT 1

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DATE
     PATENT NO.
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                                DATE
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PI
    DE 20108608
                                20010913
                                           DE 2001-20108608
                                20010523
PRAI DE 2001-20108608
os
    MARPAT 135:246996
     The invention concerns the synthesis of 2,5-Diamino-benzaldehyde-derivs.
AΒ
     and their usage in hair dye compns. as developers along with coupling
     agents and optionally direct dyes. Thus a hair dye contained (g):
     1,4-diamino-2-(piperidine-1-yl-iminomethyl)-benzene 0.30;
     3-methyl-4-aminophenol 0.30; 1-naphthol 0.30; 1,3-dihydroxy benzene 0.18;
     potassium oleate 10.0; ammonia (22% solution) 10.0; ethanol 10; ascorbic acid
     0.3; water to 100. Upon usage, 30 g of the composition were mixed with 30 g 6%
     hydrogen peroxide solution; after 30 min the dye was rinsed, the resulting
     color was reddish brown.
     ANŚWER 8 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
L6
AN
     2001:338491 CAPLUS
     1/34:326404
DN
     Preparation of bis-indoles for pharmaceutical use as positive modulators
TI
     of nicotinic receptor agonists
    Balestra, Michael; Gurley, David; Rosamond, James
IN
PΑ
    Astrazeneca AB, Swed.
    PCT Int. Appl., 25 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
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                                           APPLICATION NO.
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             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, $L, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, YY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                               20020814 EP 2000-980158
     EP 1230217
                         A1
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
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                         T2
                                           JP 2001-534772
                                                                   20001101
     J<del>P 2003</del>513072
     US 6756398
                                20040629
                          В1
                                           US 2002-111028
                                                                   20020418
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PRAI SE 1999-3996
                         Α
                                2000 1101
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     MARPAT 134:326404
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Bis-indoles, such as I [R1, R1', R3, R3' = H, alkyl; R2, R2' = H, CH2CN, ABalkyl; etc.; A1, B1 = O, S, NR4; R4 = H, alkyl, alkenyl; R3R5 = fused ring; A2, B2 = C0, C(:NH), OCO, NHCO, NHCS, SO2, bond; Z = connecting group, such as alkylene, cycloalkylene, heteroalkylene, phenylene, etc.], were prepared to enhance the efficacy of agonists at nicotinic receptors for treatment of conditions associated with redns. in nicotinic transmission, such as psychotic disorders, intellectual impairment, Alzheimer's disease, cognition deficit, Parkinson's disease, etc. Thus, bis-indole II was prepared by reaction of 5-hydroxyindole with α,α' -dibromo-m-xylene using cesium carbonate. The prepared bis-indoles were assessed for their enhancement of nicotinic efficacy.

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 4 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 9 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
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2001:338490 CAPLUS AN

DN 134:326403

Preparation of indoles for pharmaceutical use as positive modulators of TI nicotinic receptor agonists

Gurley, David; Lanthorn, Thomas; Macor, John; Rosamond, James IN

AstraZeneca AB, Swed. PA

PCT Int. Appl., 26 pp. SO CODEN: PIXXD2

DTPatent

English LΑ

FAN.CNT 1																					
	PATENT NO.									APPLICATION NO.											
																					
ΡI	WO	0 2001032619				A1	.1 20010510			Ţ	WO 2	000-8	SE21								
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US 6750242
PRAI SE 1999-3997
WO 2000-SE2148
W 20001101
OS MARPAT 134:326403
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AB Indoles, such as I [R1, R3 = H, alkyl; R2 = H, CH2CN, alkyl; R4 = H, alkyl, alkenyl, alkynyl, arylalkyl, heteroalkyl, etc.; X = O, S, NR5; R5 = H, alkyl, alkenyl; R3R5 = fused ringl, were prepared to enhance the efficacy of agonists at nicotinic receptors for treatment of conditions associated with redns. in nicotinic transmission, such as psychotic disorders, intellectual impairment disorders, Huntington's disease, Tourette's syndrome, etc. Thus, 5-cinnamyloxyindole (II) was prepared by reaction of 5-hydroxyindole with cinnamyl bromide in MeCN using cesium carbonate. The prepared indoles were assessed for their enhancement of nicotinic efficacy.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:722896 CAPLUS

DN 131:317802

TI Pharmaceutical compositions comprising a positive modulator of a **nicotinic** receptor agonist

IN Gurley, David; Lanthorn, Thomas

PA Astra Aktiebolag, Swed.

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA English

	PAT	KIND DATE				i	APPL	ICAT:	ION I	DATE								
PΙ	. WO	9956	745							1	WO 1	999-	SE70	0		1:	9990	428
		W:	AE,	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,
			DE,	DK,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,
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												SD,						
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	CA	2331										999-					9990	
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	AU	7708	49			B2		2004	0304									
	BR	9910	180			Α						999-				-	9990	428
	EP	1079	828			A 1		2001	0307		EP 1	999-	9485	42		1	9990	428
	EP	1079				B1		2003										
		R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙT,	LI,	LU,	ΝL,	SE,	MC,	PT,
			ΙE,	SI,	LT,	LV,	FΙ,	RO										

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TR 2000-200003244
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    TR 200003244
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    JP 2002513757
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                               20031015
                                           AT 1999-948542
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                                           NZ 1999-507623
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    RU 2225203
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                                           ZA 2000-6133
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    ZA 2000006133
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                                           NO 2000-5503
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    NO 2000005503
                                           US 2001-812269
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                         A1
                               20011115
    US 2001041732
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    HK 1034205
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                               20040121
                                           HK 2001-105008
                               19980504
PRAI US 1998-71826
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                               19990428
    WO 1999-SE700
    The present invention relates to pharmaceutical compns. comprising a pos.
    modulator of a nicotinic receptor agonist, said pos. modulator
    having the capacity to increase the efficacy of the said nicotinic
    receptor agonist. As an example, effect of nAChR\alpha7 modulator on
    agonist activity was measured by Ca2+ flux through nAChRα7 expressed
     in HEK-293 cells. The nicotinic agonist [-]spiro[1-
    azabicyclo[2,2,2]octane-3,5-oxazolidine]-2-one was used.
             THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 1
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 11 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
Ľ6
    1997:414195 CAPLUS
AN
     127:34137
DN
    Preparation of quinoline and quinazoline derivatives inhibiting
TI
    platelet-derived growth factor receptor autophosphorylation
     Kubo, Kazuo; Ohyama, Shinichi; Shimizu, Toshiyuki; Nishitoba, Tsuyoshi;
IN
     Kato, Shinichiro; Murooka, Hideko; Kobayashi, Yoshiko; et al.
     Kirin Beer Kabushiki Kaisha, Japan
PA
     PCT Int. Appl., 243 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
     Japanese
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FAN.CNT 1
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                                                                 19961105
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     WO 9717329
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             DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO,
             RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
             MR, NE, SN, TD, TG
                                                                   19961105
                                            AU 1996-73400
     AU 9673400
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                                            EP 1996-935541
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         R: CH, DE, FR, GB, LI
                                            TW 1996-85113529
                                                                   19961106
                                20020421
     TW 483891
                          В
                                                                   19980506
                                           US 1998-68660
     US 6143764
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PRAI JP 1995-313555
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                                19960223
     JP 1996-62121
     WO 1996-JP3229
                         W
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     MARPAT 127:34137
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AB The title compds. I [R1 and R2 represent each H or C1-4 alkyl, or R1 and R2 together form C1 to C3 alkylene; X represents O, S or CH2; W represents CH or N; and Q represents substituted aryl or substituted heteroaryl] are prepared I inhibit platelet-derived growth factor receptor autophosphorylation and are useful in the treatment of cancer, arthritis, etc. The title compound II (preparation given) (at 100 mg/kg i.p. once daily

for 9 days) increased the survival of mice with transplanted leukemic P388 cells by 130%.

L6 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:256576 CAPLUS

DN 126:326520

TI Shift of the high-performance liquid chromatographic retention times of metabolites in relation to the original drug on an RP8 column with acidic mobile phase

AU Herre, S.; Pragst, F.

CS Institute of Legal Medicine of the Humboldt-University, Hannoversche Strasse 6, D-10115, Berlin, Germany

Journal of Chromatography, B: Biomedical Sciences and Applications (1997), 692(1), 111-126
CODEN: JCBBEP; ISSN: 0378-4347

PB Elsevier

DT Journal

LA English

The effect of the structural change in the metabolism of drugs on the HPLC AΒ retention time with an RP8 column with an acetonitrile-phosphate buffer (pH 2.3) as the mobile phase was investigated at model compound pairs of 29 functionalization reactions. A more or less typical region for TM = log(k'M/k'D) was found for each of these reactions (with k'M and k'D being the capacity factors of the metabolite and the drug, resp.), which can be explained by an increase or a decrease of the hydrophilic properties caused by the structural change. This effect is superimposed by an essential influence of the unchanged part of the mol. and in some cases by special intramol. interactions like the hydrogen bond. Despite the more complicated structure of real drugs, the results obtained at the model compound pairs were confirmed for most of the 55 metabolite/drug pairs. practical use of the TM values as a support to distinguish between different metabolites in the HPLC-DAD (photodiode array detector) anal. of intoxications is demonstrated with cases of poisoning with diphenhydramine, propafenone and methaqualone.

L6 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:535762 CAPLUS

DN 103:135762

TI The enteric neural receptor for 5-hydroxytryptamine

AU Gershon, M. D.; Takaki, M.; Tamir, H.; Branchek, T.

CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA

SO Experientia (1985), 41(7), 863-8 CODEN: EXPEAM; ISSN: 0014-4754

DT Journal LA English

An enteric neural receptor for serotonin (5-HT) [50-67-9] was AΒ characterized by using [3H]5-HT as a radioligand. High-affinity, saturable, reversible, and specific binding of [3H]5-HT was demonstrated both to membranes of the dissected longitudinal muscle with adherent myenteric plexus and to the mucosa-submucosa. These [3H]5-HT binding sites were in myenteric ganglia and in a broad unresolved band at the mucosal-submucosal interface. Antagonists active at receptors for neurotransmitters other than 5-HT failed to inhibit binding of [3H]5-HT. The structural requirements of analogs for binding to the enteric 5-HT receptor matched the known pharmacol. of M or neural 5-HT receptors. A novel 5-HT antagonist, N-acetyl-5-hydroxytryptophyl-5hydroxytryptophanamide (5-HTP-DP) [71338-67-5], antagonized the action of 5-HT on type II/AH cells of the myenteric plexus but did not affect the release or actions of acetylcholine (nicotinic or muscarinic) or substance P. 5-HTP-DP was also an equally potent displacer of [3H]5-HT from its binding sites on enteric membranes. Apparently, the sites responsible for specific binding of [3H]5-HT are enteric M or neural 5-HT receptors, and they differ from those known to be present in the central nervous system.

L6 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:106486 CAPLUS

DN 102:106486

TI Enteric receptors for 5-hydroxytryptamine

AU Branchek, Theresa; Kates, Mandes; Gershon, Michael D.

CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA

SO Brain Research (1984), 324(1), 107-18 CODEN: BRREAP; ISSN: 0006-8993

DT Journal LA English

AB 3H-labeled 5-HT [50-67-9] was used as a radioligand to study enteric 5-HT receptors. Membranes were derived from prepns. of longitudinal muscle with adherent myenteric plexus and of mucosa-submucosa dissected from guinea pig and rabbit small intestines. Specific [3H]5-HT binding was found in both prepns. Binding was saturable and dissociable with equilibrium dissociation consts. (Kd) of 2.7 and 1.4 nM, resp. A kinetic estimate of Kd

(1.5 nM) was similar to that determined by saturation anal. and the Hill coefficient approximated unity. Ring-hydroxylation of indoles was a requirement for antagonism of [3H]5-HT binding. On the other hand, substitutions could be made in the aliphatic side chain of tryptamines without destroying the affinity of analogs for the binding sites. The inability of antagonists to displace [3H]5-HT indicated that the binding sites were not muscarinic or ${\tt nicotinic}$ receptors, $\alpha\text{-}$ or $\beta\text{-}adrenoceptors$, H1 or H2 histamine receptors, dopamine receptors or either the S1 or S2 types of 5-HT receptor found in the brain. Frozen section dry mount radioautog. revealed [3H]5-HT binding sites in ganglia of the myenteric plexus and at the boundary between the mucosa and submucosa. The similarity between the structure-activity requirements for affinity at the [3H]5-HT binding sites and activation of neural or M receptors for 5-HT in the gut, as well as the characteristics and location of the binding sites suggests that they are enteric neural receptors for 5-HT.

L6 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1971:17868 CAPLUS

DN 74:17868

TI Electron spin resonance studies of the excited triplet states of DL-5-hydroxytryptophan, 5-hydroxyindole, 6-hydroxynicotinic acid, indole, and hippuric acid

AU Chen, Tzeng-Ming

- CS Dep. of Chem., Univ. of California, Los Angeles, CA, USA SO Photochemistry and Photobiology (1970), 12(2), 81-90 CODEN: PHCBAP; ISSN: 0031-8655
- DT Journal
- LA English
- AB ESR measurements were made of indole (I), DL-5-hydroxytryptophan (II), 6-hydroxynicotinic acid (III), 5-hydroxyindole (IV), and hippuric acid (V) in various glasses at 77°K. Ethylene glycol-H2O (1:1), glycerol-H2O (1:1), propylene glycol-H2O (1:1), and Et2O-isopentane-EtOH (5:5:2) were used as solvents, and in some cases different pH values were employed. In addition, I was prepared in solution in Me methacrylate monomer

and

then polymerization induced with Bz peroxide so as to give a rigid glassy plastic solution that could be used for ESR detns. at >77°K. The $\Delta m=2$ transitions were observed and the spin interaction parameter (D2 + 3E2)1/2 calculated; in the case of I the $\Delta m=1$ transitions could be seen and D and E determined sep. From these functions and from the decay times of the triplets, it appeared that the lowest triplets were all $\pi^-\pi^*$ states. Effects of pH on the ESR spectra of II, III, and IV showed removal of the H from the phenolic OH changed the resonance. Zero-field splitting parameters (D*) for III, IV, and V were little affected by ionization of the NH group on the pyrrole ring, and in the case of I and III changes in the nature of the glassy medium also had only small effects. There was a 20-fold decrease in ESR intensity of I in plastic between 77 and 181°K, accompanied by linear decreases in D* (4.2% total change) and triplet lifetimes.

- L6 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 1961:66373 CAPLUS
- DN 55:66373
- OREF 55:12649f-h
- TI Influence of reserpine, serotonin, and metabolites of tryptophan on the degradation of thyroxine and its derivatives
- AU Galton, Valerie Anne; Ingbar, Sidney H.
- CS Harvard Med. School, Boston, MA
- SO Endocrinology (1961), 68, 435-49 CODEN: ENDOAO; ISSN: 0013-7227
- DT Journal
- LA Unavailable
- The effect of tryptophan metabolites in blocking the in vitro action of thyroxine in kidney tissue was investigated in mouse and tadpole tissues after pretreatment of these animals with the metabolites. Serotonin (I), 5-hydroxytryptophan, 5-hydroxyindole, 5-hydroxyindoleacetic acid, 3-hydroxyanthranilic acid, xanthurenic acid, and reserpine (II) all depressed the formation of iodide from thyroxine by tissue homogenates; no such effect was shown by tryptophan, indole, indoleacetic acid, anthranilic acid, quinolinic acid, kynurenine, kynurenic acid, or nicotinic acid. I and II inhibited deiodination of the iodothyroacetic acids but in mouse liver homogenates I did not alter the deiodinations of the iodotyrosines. Pretreatment of mice and tadpoles with II depressed the capacity of liver to degrade thyroxine in vitro. Some tissues could deaminate thyroxine; such deamination was increased by added I.